



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,403	11/28/2003	Allen Fong-Chin Lin	L9079.03110	7174

7590 08/12/2005

STEVENS, DAVIS, MILLER & MOSHER, L.L.P.  
Suite 850  
1615 L Street, N.W.  
Washington, DC 20036

EXAMINER

EASHOO, MARK

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/722,403

Applicant(s)

LIN, ALLEN FONG-CHIN

Examiner

Mark Eashoo, Ph.D.

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of claims 4-6 in the reply filed on 20-MAY-2005 is acknowledged. The traversal is on the ground(s) that there is no burden on the Office. This is not found persuasive because the examination of the product does not require specific consideration of the process steps, but rather only the structure of the product. Similarly, examination of the process does not require specific consideration of only the product structure, but rather how the material of the product is formed into the final product.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claim grouping, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 20-MAY-2005.

### *Information Disclosure Statement*

The information disclosure statement filed 28-NOV-2003 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Accordingly, it has been placed in the application file and the information referred to therein has been considered as to the merits.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically claim 4, recites the limitations: "the 5-layer co-extruded biaxial-oriented polypropylene synthetic paper" in line 1; "the 5-layer laminated structure" in line 2; "the uppermost layer" in line 5; "the bottom layer" in line 5; "the mixture" in line 8; "the feeding hopper" in line 12; "the well blended mixture" in line 14; "the well blended and air vented mixture" in line 15; "the first layer runner" in line 16; "the fifth layer runner" in line 16; "the T-die" in line 16; "the second layer" in line 18; "the forth layer" in line 18; "the mixture" in line 21; "the feeding hopper" in line 25; "the well blended mixture" in line 27; "the well blended and air vented mixture" in line 28; "the second layer runner" in line 29; "the forth layer runner" in line 29; "the same T-die" in line 29; "the third layer" in line 31; "the foamed layer" in line 31; "the feeding hopper" in line 37; "the mixture" in line 33; "the well blended an air vented mixture" in line 39; "the third layer runner" in line 39; "the same T-die" in line 40; "the 5-layer laminated structure" in line 41; "the co-extruding process" in line 41; "the T-die" in line 41; "the cooling and forming equipment" in line 42; "the longitudinal orientation device" in line 44; "the 5-layer laminated sheet" in lines 48 and 51; "the lateral orientation device" in line 48;

Art Unit: 1732

"the laminated sheet" in line 52; and "the finished product" in line 54. There is insufficient antecedent basis for these limitations in the claim.

Specifically claim 5, recites the limitations: "the additives of inorganic powder" in line 2; "the master batch" in line 3; and "the surface treatment process" in line 6. There is insufficient antecedent basis for these limitations in the claim.

Specifically claim 6, recites the limitations: "the mixture of additives and inorganic powder" in line 3; "the extruder" in line 4; "the side feeding hopper" in line 4; and "the master batch" in line 5. There is insufficient antecedent basis for these limitations in the claim.

Claim 4 also recites the limitation "two hopper venting type single-screw secondary extruders" in steps (a) and (b). The claim is indefinite because it is unclear if these are different sets of the same type of extruders or if they are the same set of extruders used in both steps.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over in view of Ohba et al. (US Pat. 4,986,866).

Claim 1 of U.S. Patent No. 6,368,543 teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: a thickness of 25-250  $\mu\text{m}$ ; polypropylene co-extruded layers comprising calcium carbonate and titanium oxide masterbatches, antiblocking agents, and ultraviolet light absorbers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. Claim 1 of U.S. Patent No. 6,368,543 substantially teaches the claimed ranges of components (eg. masterbatches and polymers), processing temperatures, and orientation/draw ratios.

Claim 1 of U.S. Patent No. 6,368,543 does not teach a 5-layered synthetic paper. However, Ohba et al. teaches a 5-layered synthetic paper (Fig. 5). Claim 1 of U.S. Patent No. 6,368,543 and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of claim 1 of U.S. Patent No. 6,368,543, and would have been motivated to do so since Ohba et al. suggests that thin top

Art Unit: 1732

layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6,379,605 in view of Ohba et al. (US Pat. 4,986,866).

Claim 2 of U.S. Patent No. 6,379,605 teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: polypropylene co-extruded layers comprising calcium carbonate and titanium oxide additives, antiblocking agents, and ultraviolet light absorbers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. Claim 2 of U.S. Patent No. 6,379,605 substantially teaches the claimed ranges of components (eg. additives and polymers), processing temperatures, and orientation/draw ratios. Official Notice is given that use of masterbatches is well known in the molding art.

Claim 2 of U.S. Patent No. 6,379,605 does not teach a 5-layered synthetic paper in the range of 30-300 $\mu$ m. However, Ohba et al. teaches a 5-layered synthetic paper in the range of 30-300 $\mu$ m (Fig. 5). Claim 2 of U.S. Patent No. 6,379,605 and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of claim 2 of U.S. Patent No. 6,379,605, and would have been motivated to do so since Ohba et al. suggests that thin top layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,368,988 in view of Ohba et al. (US Pat. 4,986,866).

Claim 1 of U.S. Patent No. 6,368,988 teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: a thickness of 25-250  $\mu$ m; polypropylene co-extruded layers comprising calcium carbonate and titanium oxide additives, antiblocking agents, and ultraviolet light absorbers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. Claim 1 of U.S. Patent No. 6,368,988 substantially teaches the claimed ranges of components (eg. additives and polymers), processing temperatures, and orientation/draw ratios. Official Notice is given that use of masterbatches is well known in the molding art.

Claim 1 of U.S. Patent No. 6,368,988 does not teach a 5-layered synthetic paper. However, Ohba et al. teaches a 5-layered synthetic paper (Fig. 5). Claim 1 of U.S. Patent No. 6,368,988 and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of, claim 1 of U.S. Patent No. 6,368,543, and would have been motivated to do so since Ohba et al. suggests that thin top layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Art Unit: 1732

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,552,011 in view of Ohba et al. (US Pat. 4,986,866) and Hanada et al. (US 2002/0098339 A1).

Claim 1 of U.S. Patent No. 5,552,011 teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: a thickness of 30-100  $\mu\text{m}$ ; polypropylene co-extruded layers comprising calcium carbonate and titanium oxide masterbatches, antiblocking agents, and ultraviolet light absorbers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. Claim 1 of U.S. Patent No. 6,368,543 substantially teaches the claimed ranges of components (eg. masterbatches and polymers), processing temperatures, and orientation/draw ratios.

Claim 1 of U.S. Patent No. 5,552,011 does not teach a 5-layered synthetic paper. However, Ohba et al. teaches a 5-layered synthetic paper (Fig. 5). Claim 1 of U.S. Patent No. 5,552,011 and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of claim 1 of U.S. Patent No. 5,552,011, and would have been motivated to do so since Ohba et al. suggests that thin top layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Claim 1 of U.S. Patent No. 5,552,011 does not teach a foam layer in a film. However, Hanada et al. teaches that foam layers are known in films. A person of ordinary skill in the art would have found it obvious to have made a foam layer in the process of claim 1 of U.S. Patent No. 5,552,011, because foams generally reduce weight of molded products.

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,332,940 in view of Ohba et al. (US Pat. 4,986,866) and Hanada et al. (US 2002/0098339 A1).

Claim 1 of U.S. Patent No. 6,332,940 teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: a thickness of 20-60  $\mu\text{m}$ ; polypropylene co-extruded layers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. Claim 1 of U.S. Patent No. 6,332,940 substantially teaches the claimed ranges of components (eg. polymers), processing temperatures, and orientation/draw ratios.

Claim 1 of U.S. Patent No. 6,332,940 does not teach the use of various additives. Nonetheless, use of various additives such as calcium carbonate and titanium oxide (whitening agents), antiblocking agents, and ultraviolet light absorbers are well known in the art for their stated use and would have been used to make an opaque paper. Official Notice is given that use of masterbatches is well known in the molding art.

Art Unit: 1732

Claim 1 of U.S. Patent No. 6,332,940 does not teach a 5-layered synthetic paper. However, Ohba et al. teaches a 5-layered synthetic paper (Fig. 5). Claim 1 of U.S. Patent No. 6,332,940 and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of claim 1 of U.S. Patent No. 6,332,940, and would have been motivated to do so since Ohba et al. suggests that thin top layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Claim 1 of U.S. Patent No. 6,332,940 does not teach a foam layer in a film. However, Hanada et al. teaches that foam layers are known in films. A person of ordinary skill in the art would have found it obvious to have made a foam layer in the process of claim 1 of U.S. Patent No. 6,332,940, because foams generally reduce weight of molded products.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over JP2000-211008 A in view of Ohba et al. (US Pat. 4,986,866). (*See attached Derwent printout for teachings related to JP2000-211008 A.*)

JP2000-211008 A teaches the basic claimed process of producing a multilayered BOPP synthetic paper, comprising: polypropylene co-extruded layers comprising calcium carbonate and titanium oxide additives, antiblocking agents, and ultraviolet light absorbers; primary and secondary vented screw extruders coupled to a co-extrusion T-die; a foamed intermediate layer; cooling the extrudate; laterally and longitudinally orienting the co-extrudate; treating the co-extrudate by corona discharge; and winding the oriented BOPP synthetic paper on to a roll. JP2000-211008 A substantially teaches the claimed ranges of components (eg. additives and polymers), processing temperatures, and orientation/draw ratios. Official Notice is given that use of masterbatches is well known in the molding art.

JP2000-211008 A does not teach a 5-layered synthetic paper in the range of 30-300 $\mu$ m. However, Ohba et al. teaches a 5-layered synthetic paper in the range of 30-300 $\mu$ m (Fig. 5). JP2000-211008 A and Ohba et al. are combinable because they are from the same field of endeavor, namely, synthetic papers. At the time of invention a person of ordinary skill in the art would have found it obvious to have made a 5-layered synthetic paper, as taught by Ohba et al., in the process of JP2000-211008 A, and would have been motivated to do so since Ohba et al. suggests that thin top layers can be tailored to improved printability (on one side) and heat sealability (on the other) without effecting the overall physical properties of a 3-layer synthetic paper.

Art Unit: 1732

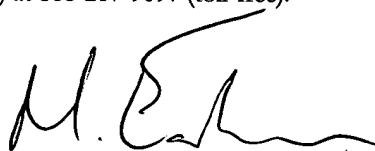
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. see attached PTO-892.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732

08/Aug/05

2005-08-08  
me